



# Draft Development Guidelines for the Land Use Plan

*Port of Abbot Point*

## PREFACE

These Development Guidelines support the Land Use Plan for the Port of Abbot Point (a statutory document under the *Transport Infrastructure Act 1994*), by the North Queensland Bulk Ports Corporation Limited (NQBP).

These guidelines provide more detailed assessment criteria (in the form of codes) against which new development on port land will be assessed.

They are intended to be used principally by NQBP (as the port authority) to assess proposed development on strategic port land at the Port of Abbot Point. Therefore they provide to existing and future users of port land an indication of expected outcomes in relation to development.

They are to be read in conjunction with the Land Use Plan for the Port of Abbot Point and other related documents including the Port of Abbot Point Environmental Management Plan.

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## 1. INTRODUCTION

The *Transport Infrastructure Act 1994* requires that Land Use Plans include measures that will help achieve the Desired Environmental Outcomes (DEOs) described in each Plan. DEOs are expressions of the intended end state for the subject area, in this case the Port of Abbot Point. The requirement for Land Use Plans to include measures reflects a performance based approach to development of port land.

Measures for the purpose of the Port of Abbot Point Land Use Plan include:

- (i) Land Use Plan designations, intent statements and indicative uses; and
- (ii) Development Guidelines (this document) which include a number of Codes comprising the following common elements:
  - Overall Outcomes (the purpose of the code)
  - Specific Outcomes (detailed assessment criteria addressing all relevant considerations, which collectively contribute to achieving the overall outcomes)
  - Solutions (where specified, these are a guide to achieving the specific outcomes, and NQBPs preferred approach<sup>1</sup>).

These Development Guidelines represent criteria against which development proposals on strategic port land at the Port of Abbot Point are assessed. When a development proposal is received, NQBP will determine the extent to which it complies with the DEOs of the Land Use Plan by assessing the proposal against the measures contained within both the Land Use Plan and these Guidelines. Therefore in applying for development, the Codes identified in these Guidelines must be addressed.

This document makes reference to a range of other documents, policies and legislation<sup>2</sup> which are not included in it. Proponents are strongly advised to consult these related materials prior to undertaking design work.

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<sup>1</sup> A proposal may put forward alternative solutions but in doing so, should demonstrate to NQBP's satisfaction that the alternative solution achieves the relevant specific outcome.

<sup>2</sup> In the event of any conflict between this document and legislation, the legislation prevails.

## 2. DESIGN, SITING AND LAYOUT

### 2.1 Overall Outcomes for Design, Siting and Layout

- All port land is used efficiently.
- The design and siting of all development has regard to the sites topography and natural features as well as surrounding land uses.
- Premises are laid out to provide a safe and attractive working environment.
- Premises have safe and convenient vehicular and pedestrian access and linkages to the transport network.
- Buildings and structures are designed, sited and finished to achieve a high quality, attractive and sustainable built form, in keeping with the local environment and character of the area.
- Development is designed to address potential impacts from climate change.

### 2.2 Specific Outcomes for Design, Siting and Layout

Specific Outcomes	Solutions
<b>Site Suitability</b>	
<p>SO1. The site has sufficient area and dimensions to provide for:</p> <ul style="list-style-type: none"> <li>▪ uses and associated activities consistent with the operation of the use;</li> <li>▪ safe and convenient vehicular and pedestrian access;</li> <li>▪ adequate parking for staff and customers;</li> <li>▪ landscaping and buffers on all boundaries adjoining private land; and</li> <li>▪ storage, stockpile and loading/unloading areas.</li> </ul>	<p>S1.1. No solution provided.</p>
<p>SO2. Site constraints including topography, acid sulfate soils, storm surge and flooding, ecosystem and vegetation presence, are examined when reviewing options or alternatives for development.</p>	<p>S2.1. No solution provided.</p>
<b>Site Layout</b>	
<p>SO3. Buildings and other port facilities do not result in an avoidable loss of amenity and are set back from road frontages and site boundaries to provide for:</p> <ul style="list-style-type: none"> <li>▪ safe and efficient use of the site;</li> <li>▪ an attractive streetscape character;</li> <li>▪ landscaping; and</li> <li>▪ utility services and drainage paths.</li> </ul>	<p><i>In partial satisfaction of SO3.</i></p> <p>S3.1. No part of any building or structure on a road-fronting lease boundary is set back less than</p> <ul style="list-style-type: none"> <li>▪ 10m from a major arterial, traffic distributor or major collector road; and</li> <li>▪ 6m from any other road.</li> </ul> <p>S3.2. Buildings or structures adjoining sensitive land uses must have a minimum setback of 20 metres.</p> <p>S3.3. Potential noise sources (including generators and air conditioners) are located away from</p>

Specific Outcomes	Solutions
	<p>surrounding sensitive receiving environments.</p> <p>S3.4. Landscaping (or other appropriate means) is used to screen and minimise adverse impacts of development on road frontages, streetscapes or adjacent sensitive land uses (to be provided in accordance with Section 6 Amenity and Landscaping).</p> <p>S3.5. Site cover of all buildings is a maximum 70% of the land area.</p>
<p>SO4. The arrangement of on-site buildings, access, vehicle and specific work/ usage areas:</p> <ul style="list-style-type: none"> <li>▪ contributes to the safety of site operations and its relationship to the streetscape;</li> <li>▪ provides for non-discriminatory access;</li> <li>▪ provides clear identification of all building entry points;</li> <li>▪ provides adequate accessibility between buildings and parking areas; and</li> <li>▪ provides appropriate security and safety measures.</li> </ul>	<p><i>In partial satisfaction of SO4.</i></p> <p>S4.1. The main entry to development is easily identified and directly accessible from the principal street frontage of the site.</p> <p>S4.2. Appropriate space is allocated for present and future storage, vehicle usage areas and infrastructure including (where appropriate):</p> <ul style="list-style-type: none"> <li>▪ loading/ unloading;</li> <li>▪ wash-down, servicing and repair;</li> <li>▪ access for service vehicles;</li> <li>▪ staff and visitor parking; and</li> <li>▪ present and future infrastructure including sewer or on-site treatment facilities, water connection, stormwater, telecommunications, power, lighting, trade waste, storage tanks, and fire fighting systems.</li> </ul> <p>S4.3. Active work areas are physically segregated from areas accessible to the public such as parking.</p> <p>S4.4. Building and site planning must provide for non-discriminatory access in accordance with AS1428 – Design for Access and Mobility.</p>

Specific Outcomes	Solutions
<b>Building and Structure Design, Character and Materials</b>	
<p>SO5. The design and appearance of buildings and structures reflects high quality standards and will:</p> <ul style="list-style-type: none"> <li>▪ create a strong sense of visual interest;</li> <li>▪ be of a scale and character consistent with the surrounding built environment or intended character of the relevant land use designation;</li> <li>▪ function safely and efficiently;</li> <li>▪ be aesthetically appropriate;</li> <li>▪ not be dominated by air-conditioning units, telecommunication equipment or screened enclosures.</li> </ul>	<p><i>In partial satisfaction of SO5.</i></p> <p>S5.1. All aspects of the building design comply with the relevant Building Code standards and any relevant State Planning Policy.</p> <p>S5.2. No part of any building, associated structure, vehicle usage or storage area is within the landscaping strip to any frontage.</p> <p>S5.3. Commercial and office buildings must provide innovative, flexible or varied treatments in regards to the following elements:</p> <ul style="list-style-type: none"> <li>▪ façade treatments;</li> <li>▪ front entry – all buildings shall provide a canopy recess, awning or colonnade at the principal entry;</li> <li>▪ roof pitch design, height and style;</li> <li>▪ parapet design and building treatments;</li> <li>▪ recesses, overhangs and shading; and</li> <li>▪ building colours, textures and materials – colours are to be aesthetically pleasing or unobtrusive against the natural environment.</li> </ul> <p>S5.4. No reflective surfaces are permitted.</p>
<p>SO6. Development affecting land below the high water mark (such as landings, ramps, berthing facilities and retaining walls) is designed and constructed according to requirements of relevant Commonwealth or State legislation and standards and must be approved by a RPEQ certified engineer.</p>	<p>S6.1. No solution provided.</p>

Specific Outcomes	Solutions
<p>S07. The design and operation of buildings and structures incorporates sustainability and environmental management principles, particularly with regard to:</p> <ul style="list-style-type: none"> <li>▪ waste management;</li> <li>▪ energy use and loss;</li> <li>▪ water use and reuse;</li> <li>▪ contribution to greenhouse gases;</li> <li>▪ ventilation; and</li> <li>▪ heat gain and loss.</li> </ul>	<p><i>In partial satisfaction of S07.</i></p> <p>S7.1. Commercial and office buildings achieve a minimum 4 Star Green Star Certified Rating.</p> <p>S7.2 All new structures include:</p> <ul style="list-style-type: none"> <li>▪ use of building materials and features which are suitable for the local climate (including sun shading devices on buildings);</li> <li>▪ provision for natural light and ventilation, privacy and noise attenuation;</li> <li>▪ energy efficient lighting and air-conditioning;</li> <li>▪ provision of landscaping to provide shading and screening, using endemic native species where possible;</li> <li>▪ features that allow waste to be minimised in the first instance and recycling and reuse of waste;</li> <li>▪ stormwater collection and reuse; and</li> <li>▪ water saving measures on tap fittings and toilets.</li> </ul>
<p>S08. Development contributes to creating a socially, visually and physically amenable work environment.</p>	<p><i>In partial satisfaction of S08.</i></p> <p>S8.1. On site areas for staff amenity and recreation are provided in locations away from operational areas and incorporate:</p> <ul style="list-style-type: none"> <li>▪ weather protection</li> <li>▪ seating, tables and rubbish bins;</li> <li>▪ safe and easy access for employees; and</li> <li>▪ landscaping.</li> </ul>

Specific Outcomes	Solutions
<p>SO9. For all new development, site constraints, including topography, the potential for acid sulfate soil disturbance, storm/tide surges (including allowance for the expected increase in sea levels), storm-water and flooding, are identified and addressed in the design.</p>	<p><i>In partial satisfaction of SO9.</i></p> <p>S9.1. Finished building floor levels are above Q100 flood heights and storm surge heights at king tides, plus the expected sea level rise in the coming 100 years.</p> <p>S9.2. Ground levels for areas proposed to store potentially hazardous material or other materials that has potential to contaminate stormwater runoff from the site, must be above the Q100 flood heights.</p> <p>S9.3. Building design features include measures to reduce impacts of flood and stormwater flows in accordance with relevant Building Code and engineering standards.</p> <p>S9.4. Acid sulfate soils are addressed in accordance with Section 3 SO9 of these guidelines.</p> <p>S9.5. Consideration of off-site flooding impacts is undertaken in the pre-design phase of development. This may need to be demonstrated through appropriate flood modeling scenarios prepared by a suitably qualified hydraulic engineer.</p>
<p>SO10. Development is designed to take account of the expected changes to the coastal environment and climate patterns resulting from climate change.</p>	<p>S10.1. No solution provided.</p>
<b>Temporary Buildings</b>	
<p>SO11. Temporary buildings and the like do not have significant long term adverse impacts on the visual landscape and amenity of the port area.</p>	<p>S11.1. Temporary buildings are not used as permanent structures on port land.</p> <p>S11.2 For any proposed usage, temporary buildings must comply with relevant legislative and Building Code requirements.</p>
<b>Fencing, Lighting and Signage</b>	
<p>SO12. All fencing is to be designed and constructed to a high quality so that it provides maximum security and/ or separation, where required, without adversely affecting overall amenity and streetscape quality.</p>	<p>S12.1. Fences are finished and maintained to be visually attractive and to contribute to or blend with the site's landscaping.</p> <p>S12.2. Fence design is compatible with the buildings</p>

Specific Outcomes	Solutions
	<p>on site.</p> <p>S12.3. The minimum standard for access-control security fencing is a 1.8m high, galvanized, chain wire mesh fence, with 3 strands of barbed wire and top and bottom rails. Fencing must comply with AS1725: 2003.</p> <p>S12.4. Maximum fence height is 3m.</p> <p>S12.5. Fence design highlights entrances and paths.</p> <p>S12.6. In areas where casual surveillance from road frontages or buildings is necessary due to safety and security concerns, fencing is to demonstrate a high level of transparency.</p>
<p>SO13. Activities on site that may pose a physical or potential hazard are secured from general access.</p>	<p>S13.1. Potentially hazardous activities are fenced or security gated so that general access is prohibited.</p> <p>S13.2. Storage areas are reasonably secured from general access and generally screened from public view.</p>
<p>SO14. (i) All outdoor lighting is to:</p> <ul style="list-style-type: none"> <li>▪ be energy efficient;</li> <li>▪ facilitate a safe and secure working environment; and</li> <li>▪ contribute to the overall amenity of the streetscape and the port.</li> </ul> <p>(ii) Light emissions from outdoor lighting, either directly or by reflection, do not have an adverse impact on any person, activity or fauna.</p>	<p><i>In partial satisfaction of SO13.</i></p> <p>S14.1. The design and appearance of lighting fixtures is complementary to amenity and streetscape values.</p> <p>S14.2. Light shades and other devices are used to reduce light spillage to any sensitive place, environment, use or area.</p> <p>S14.3. Energy efficient lighting technologies are adopted.</p> <p>S14.4. Lighting structures are of a sufficient height to provide enhanced safety and security to an area.</p> <p>S14.5. Lighting is to be directed away from neighbouring sensitive or residential areas.</p>

Specific Outcomes	Solutions
<p>SO15.</p> <p>(i) Signage achieves acceptable standards of public safety and does not unreasonably detract from the natural and built environment.</p> <p>(ii) Reference must be made to relevant Whitsundays Regional Council signage standards (eg local laws and planning outcomes) to seek to achieve consistent outcomes.</p>	<p>S15.1.</p> <p>A signage concept plan is submitted which illustrates design of signage that:</p> <ul style="list-style-type: none"> <li>▪ complements building form;</li> <li>▪ is constructed of high quality materials;</li> <li>▪ does not adversely impact on the streetscape or safety;</li> <li>▪ will not deteriorate in specific weather and environmental conditions; and</li> <li>▪ complies with Whitsundays Regional Council standards deemed appropriate by the Assessment Manager.</li> </ul> <p>S15.2.</p> <p>Content of signage exhibits a direct correlation to a business, operation or activity at the Port.</p>
<p><b>Additional requirements for Port Related and Support Designations at Bowen Wharves</b></p>	
<p>SO16.</p> <p>Development or activities at Bowen Wharves are designed and sited to have regard to Whitsunday Regional Council's broader master planning for the area.</p>	<p>S16.1</p> <p>No solution provided.</p>

**3. ENVIRONMENTAL MANAGEMENT**

**3.1 Overall Outcomes for Environmental Management**

- Sustainable environmental management is promoted and incorporated into all aspects of development and operations at the Port.
- Adverse environmental impacts upon surrounding ecosystems and nearby residential areas are avoided and minimised and/or mitigated where avoidance is not possible.
- Indigenous cultural heritage values and areas of historical significance are not diminished by port operations.
- Development is designed, located and conducted in a manner that is suitable for the location having regard to a range of environmental factors;
- Risks to human safety, economic interests and the on-going operation of the Port from natural and other hazards are minimised.
- Development of the Bowen Wharves protects adjoining sensitive land uses from incompatible development or unacceptable adverse impacts.

**3.2 Specific Outcomes for Environmental Management**

Specific Outcomes	Solutions
<b>Environmental Impacts</b>	
<p>SO1. Development is undertaken in a manner that minimises adverse environmental and social impacts.</p>	<p>S1.1. Development/ activities must provide for NQBP approval a project Environmental Management Plan (EMP) for construction and operation phases and implement the approved Plan.<sup>3</sup></p> <p>S1.2. Development compiles with relevant State and Federal legislation, and planning documents for managing environmental impacts (including State Coastal Management Plans).</p> <p>S1.3. Approvals, where required by legislation, must be sought for all forms of development including operational works. Specifically, development must not disturb vegetation subject to the <i>Vegetation Management Act 1999</i> without evidence of an approval or an exemption.</p> <p>S1.4. Development and operational controls must be consistent with management measures detailed in the NQBP Port of Abbot Point Environmental Management Plan.</p>

<sup>3</sup> The EMP should demonstrate compliance with relevant legislation and subordinate legislation and address all operational and construction aspects including noise; lighting; dust and other particulates; air, vapour, smoke and other airborne emissions; liquids, sewage and any other waste; odour; storm-water and any other drainage runoff; and ozone depleting and Greenhouse gases. The EMP must articulate the adopted monitoring approach, responsibilities, and reporting and action plans, should incidents occur requiring remediation. The EMP will require endorsement from NQBP before the project will be given approval to proceed.

Specific Outcomes	Solutions
	<p>S1.5. Marine vegetation, particularly seagrass meadows and mangrove communities, are not disturbed or removed, without evidence of an approval or an exemption.</p>
<p>SO2. Where relevant, design of development avoids or minimises adverse impacts on areas of high ecological, geological and cultural heritage value, and specifically addresses the protection of:</p> <ul style="list-style-type: none"> <li>▪ habitat;</li> <li>▪ vegetation;</li> <li>▪ wetlands and waterways;</li> <li>▪ wildlife corridors;</li> <li>▪ water quality;</li> <li>▪ water flow;</li> <li>▪ marine sediment transfer;</li> <li>▪ erosion prone local areas;</li> <li>▪ ecological function;</li> <li>▪ unique rock formations;</li> <li>▪ landscape quality and amenity; and</li> <li>▪ recreational value.</li> </ul>	<p><i>In partial satisfaction of SO2.</i></p> <p>S2.1. Development on land adjoining an area identified as Environmental Protection in the Land Use Plan, includes appropriate measures such as setbacks, landscaped buffers etc to minimise any adverse impacts that would affect the ecological functions or cultural heritage values of that area.</p> <p>S2.2. Development on land adjoining an area identified as having high ecological value outside the Land Use Plan boundaries (such as Abbot Point-Caley Valley wetland) includes appropriate measures such as setbacks, landscaped buffers, appropriate controls of any site discharges, to minimise any adverse impacts that would affect the ecological values and function of that area.</p> <p>S2.3. Areas identified as having high environmental significance (i.e. Environmental Protection Area) are to be managed and protected from incompatible development where possible, and/ or the impacts minimised.</p>
<p>SO3. Emissions from construction and operation likely to affect adjoining land uses are minimised through best practice measures. Such emissions could include:</p> <ul style="list-style-type: none"> <li>▪ air pollutants;</li> <li>▪ odour emissions;</li> <li>▪ particulate and dust;</li> <li>▪ noise;</li> <li>▪ solid and liquid waste</li> <li>▪ light; and</li> <li>▪ surface water.</li> </ul>	<p><i>In partial satisfaction of SO3.</i></p> <p>S3.1. A project Environmental Management Plan for construction and operational phases is prepared for NQBP approval and is then implemented.</p> <p>S3.2. Development, whether or not an Environmentally Relevant Activity, complies with relevant Commonwealth and State Legislation and regulations for managing the environmental impact.</p> <p>S3.3 Emissions are controlled by appropriate methods including (but not limited to):</p> <ul style="list-style-type: none"> <li>▪ pollutant reducing facilities;</li> <li>▪ dust suppression methods;</li> <li>▪ acoustic treatments and acoustic barriers;</li> <li>▪ set construction/ operation hours;</li> </ul>

Specific Outcomes	Solutions
	<ul style="list-style-type: none"> <li>▪ oil, grease and sediment traps, banded water collection bays, detention storage areas, etc; and</li> <li>▪ screening (landscaping, mounding, fencing or other).</li> </ul>
<p>SO4. New development or activities do not cause terrestrial or marine pests to be released onto land or into waterways.<sup>4</sup></p>	<p>S4.1 Activities that have the potential to cause the transfer of pests into ecological systems (such as movement of freight or release of ballast water) are managed in accordance with approved procedures.</p>
<p>SO5. Plant species used in association with landscaping of new development or revegetation:</p> <ul style="list-style-type: none"> <li>▪ complements and enhances areas of high ecological value;</li> <li>▪ utilises endemic native species to the area; and</li> <li>▪ does not detract from the health of existing local vegetation.</li> </ul>	<p>S5.1. No solution provided.</p>
<b>Cultural Heritage</b>	
<p>SO6. New development on port land protects and/or does not adversely affect:</p> <ul style="list-style-type: none"> <li>▪ areas known or suspected to have indigenous cultural heritage values, and</li> <li>▪ areas of historical significance, whether or not those values are contained on port land.</li> </ul>	<p>S6.1. Sites with known or suspected indigenous cultural heritage values are not developed until:</p> <ul style="list-style-type: none"> <li>▪ Consultation has been undertaken with the traditional owners; and</li> <li>▪ Appropriate measures to protect cultural values are incorporated into the design of new development including construction and operation phases.</li> </ul> <p>S6.2. Sites of historical significance are investigated prior to any development occurring on or near those sites.</p>

<sup>4</sup> Biosecurity Queensland and AQIS should be consulted in relation to biosecurity issues.

Specific Outcomes	Solutions
<b>Safety and Hazard Management</b>	
<p><b>SO7.</b> New development or operations on port land minimises hazards and risks which could have impacts on human safety or on-going port operations. In particular, risks and hazards associated with goods and materials and their associated:</p> <ul style="list-style-type: none"> <li>▪ storage;</li> <li>▪ packaging</li> <li>▪ processing;</li> <li>▪ trading;</li> <li>▪ treatment;</li> <li>▪ disposal; and/or</li> <li>▪ movement;</li> </ul> <p>meet acceptable safety and risk standards.</p>	<p>In partial satisfaction</p> <p><b>S7.1.</b> Development and activities comply with any requirements of Commonwealth and State legislation (including subordinate legislation).</p> <p><b>S7.2.</b> Public access does not interfere with the safe and efficient operation of the site.</p> <p><b>S7.3.</b> Active work areas are physically segregated from publically accessible areas such as visitor and staff parking.</p>
<p><b>SO8.</b> Development complies with State Planning Policy 1/03 Mitigating the Adverse Impacts of Flood, Bushfire and Landslide and its associated guideline.</p>	<p><b>S8.1.</b> No solution provided.</p>
<b>Acid Sulfate Soils</b>	
<p><b>SO9.</b> For new development in port areas where acid sulfate soils are susceptible to disturbance, the development either:</p> <ul style="list-style-type: none"> <li>▪ does not disturb the acid sulfate soils; or</li> <li>▪ manages them so as to minimise the release of acid or metal contaminants to soil or water.</li> </ul>	<p><b>S9.</b> In areas of actual or possible acid sulfate soils, as part of the development application the following is undertaken:</p> <ul style="list-style-type: none"> <li>▪ testing for acid sulfate soils by a suitably qualified person; and</li> <li>▪ if acid sulfate soils are identified, a management plan for the site is to be prepared by a suitably qualified person in accordance with State Planning Policy 2/02 (this management plan is to be submitted to the Department of Environment and Resource Management for review as an Advice Agency).</li> </ul>
<b>Water Sensitive Design</b>	
<p><b>SO10.</b></p> <p>(i) Stormwater from development is not to cause an intensification of volumes at any point on surrounding land uses or infrastructure (including road and rail corridors).</p> <p>(ii) Treatment and disposal of waste water ensures:</p> <ul style="list-style-type: none"> <li>▪ no adverse ecological impacts on the environment, particularly nearby receiving environments including surface waters</li> </ul>	<p><i>In partial satisfaction of SO10.</i></p> <p><b>S10.1.</b> Rainwater harvesting systems must be utilised to supplement the mains water supply for uses including, but not limited to, toilet flushing, landscape irrigation, and dust suppression.</p> <p><b>S10.2.</b> Landscape design includes measures to reduce traditional stormwater infrastructure, such as pipes, and increase water storage and ground infiltration. Such technologies</p>

Specific Outcomes	Solutions
<p>and ground water;</p> <ul style="list-style-type: none"> <li>▪ the cumulative impacts of on-site wastewater treatment does not cause deterioration of environmental conditions;</li> <li>▪ there is maximum capture and reuse of treated water and stormwater on-site; and</li> <li>▪ maximum incorporation of Water Sensitive Design elements.</li> </ul>	<p>may include, but are not limited to bio-retention basins, filter strips and grass swales.</p> <p>S10.3. Opportunities for on-site water infiltration are maximised through drainage of hardstand towards permeable surfaces.</p> <p>S10.4. Environmental controls are implemented and maintained including:</p> <ul style="list-style-type: none"> <li>▪ treatments to prevent or minimise erosion and scouring;</li> <li>▪ detention ponds/ wetlands;</li> <li>▪ catch pits;</li> <li>▪ gross pollutant traps;</li> <li>▪ trash racks;</li> <li>▪ channeling, benching or other measures to direct flows; and</li> <li>▪ other drainage water cleaning/ filtration measures such as stormwater sediment and oil separators.</li> </ul> <p>S10.5. Sediment and nutrient loadings into watercourses are minimised through:</p> <ul style="list-style-type: none"> <li>▪ treatment of on-site effluent;</li> <li>▪ adequate stormwater runoff controls; and</li> <li>▪ on-site and off-site erosion controls.</li> </ul> <p>S10.6. The pH of water discharges is to be similar to the pH of receiving waters.</p> <p>S10.7. A site-based stormwater management plan is prepared and must provide for:</p> <ul style="list-style-type: none"> <li>▪ an acceptable level of flood immunity;</li> <li>▪ public safety and risk management measures; and</li> <li>▪ erosion and sediment controls.</li> </ul>
<p>SO11. The use of mains potable water is minimised through the use of water conservation fittings and fixtures.</p>	<p>S11. No solution provided.</p>

**4. ACCESS, ON-SITE MOVEMENT AND CIRCULATION**

4.1 Overall Outcomes for Access, On-Site Movement and Circulation

- The function and efficiency of the port is protected and enhanced through the establishment and maintenance of safe and effective movement systems.
- Development incorporates on-site vehicle access, maneuvering, parking and servicing areas suitable to meet the needs and operation of the development.
- Access and parking operates in a safe manner and does not adversely affect the amenity of the locality.

4.2 Specific Outcomes for Access, On-Site Movement and Circulation

Specific Outcomes	Solutions
<b>Road Network</b>	
<p>SO1. Planning is undertaken for new development to ensure there is minimal impact on the safety, efficiency or designated function of existing roads (both on and external to strategic port land).</p>	<p>S1.1. No direct access to port roads is provided unless approved by NQBP.</p> <p>S1.2. For major projects, a Traffic Assessment is required to be undertaken detailing the following for both construction and operation:</p> <ul style="list-style-type: none"> <li>▪ traffic generation rates;</li> <li>▪ movement of workers (including source of workers);</li> <li>▪ product handling/movement of supplies;</li> <li>▪ estimated traffic volumes;</li> <li>▪ vehicle types and trip origin/ destination details;</li> <li>▪ timeframes for estimated traffic volumes;</li> <li>▪ direction of travel;</li> <li>▪ access points;</li> <li>▪ distribution of traffic throughout the day; and</li> <li>▪ impacts and ameliorative measures proposed for port roads and the Bruce Highway (impacts include safety, efficiency, accelerated reductions in pavement life and potential increased road network maintenance).</li> </ul> <p>S1.3. Consultation is to be undertaken with the Department of Transport and Main Roads and the Whitsundays Regional Council as part of project planning and undertaking a Traffic Assessment.</p> <p>S1.4. For road works external to strategic port land, the design and construction is to the satisfaction of the Department of Transport and Main Roads and the Whitsundays Regional Council.</p>

Specific Outcomes	Solutions
<b>Vehicle access, Circulation and Maneuvering and Parking</b>	
<p>SO2.</p> <p>(i) The design of vehicle access, circulation, maneuvering and parking areas demonstrates compliance with relevant Australian Standards, relevant State policies, or any other standard adopted by the Assessment Manager.</p> <p>(ii) Vehicle circulation and maneuvering is provided on-site to meet all operational, employee and customer needs.</p>	<p>S2.1. An access, circulation, maneuvering and parking plan is provided illustrating the following details:</p> <ul style="list-style-type: none"> <li>▪ dimensions of all pavements and areas;</li> <li>▪ turning templates for largest turning circle of vehicles accessing the site;</li> <li>▪ driveways and crossovers;</li> <li>▪ access for service vehicles;</li> <li>▪ depths of, and materials used to construct pavements;</li> <li>▪ all gradients of parking, access and circulation areas;</li> <li>▪ sight lines; and</li> <li>▪ height clearances.</li> </ul> <p>S2.2. All operational, employee and customer needs for circulation (including queuing) and manoeuvring is accommodated on site including:</p> <ul style="list-style-type: none"> <li>▪ delivery and pick up;</li> <li>▪ loading and unloading;</li> <li>▪ washdown, repair, service and inspection areas;</li> <li>▪ movement between access points, parking and storage;</li> <li>▪ visitor parking and set-down areas and staff parking;</li> <li>▪ service vehicles, such as rubbish collection movement; and</li> <li>▪ movement of vehicles in a forward motion.</li> </ul> <p>S2.3. Driveways shall be flanked by 'no parking' clearways with sufficient length to enable sight lines for vehicle safety.</p> <p>S2.4. Provision is made to ensure all vehicles:</p> <ul style="list-style-type: none"> <li>▪ entering a site do not queue across footpaths, rail crossings, or onto external roads; and</li> <li>▪ are exclusively accommodated within property and/ or lease boundaries.</li> </ul> <p>S2.5. Site speed limits are to be set and displayed on signs.</p> <p>S2.6. For permanent facilities, parking and traffic areas are to be sealed to minimise dust generation and sediment run-off.</p>

Specific Outcomes	Solutions
<p>SO3. Vehicle parking is provided for the number and type of vehicles expected to access the site.</p>	<p>S3.1. Parking is provided on-site to accommodate all vehicles expected to visit the site (i.e. employees, operational, or visitors) as well as vehicles being stored on the site.</p> <p>S3.2. Safe reversing and maneuvering areas are provided to allow access to and from parking spaces.</p> <p>S3.3. Vehicle parking must be integrated with site landscaping with drainage directed over land to permeable surfaces.</p> <p>S3.4. Good accessibility is to be provided from workplaces to parking spaces.</p> <p>S3.5. The front entry to a building must not be obscured by vehicle parking.</p> <p>S3.6. The number of parking spaces provided is in accordance with <b>Table 1</b> on the following page.</p>
<b>Rail Access</b>	
<p>SO4. Rail access and facilities must:</p> <ul style="list-style-type: none"> <li>• Meet relevant design and construction requirements and standards; and</li> <li>• Effectively manage potential impacts on port operations or adjoining uses.</li> </ul>	<p><i>In partial satisfaction of SO4.</i></p> <p>S4.1. All works are designed and constructed in accordance with relevant Commonwealth and State legislation and regulations, and where appropriate the requirements of relevant referral agencies.</p> <p>S4.2. Measures to minimise noise, dust, light, and any other emission or amenity impacts, must be incorporated into the design of rail infrastructure.</p> <p>S4.3. Boundary security fencing is provided to rail corridors.</p>
<b>Pedestrian and Disabled Access and Circulation</b>	
<p>SO5. Access and circulation for pedestrians and persons with a disability minimises vehicular/pedestrian conflicts.</p>	<p>S5.1. Access and on-site circulation is arranged so that pedestrians are able to move safely and directly between:</p> <ul style="list-style-type: none"> <li>▪ access points;</li> <li>▪ parking areas;</li> <li>▪ outdoor recreation areas; and</li> <li>▪ workplaces.</li> </ul>

Specific Outcomes	Solutions
	<p>S5.2. Pedestrian access across areas dedicated as loading bays, freight docks, and for larger vehicle movements is restricted.</p> <p>S5.3. Where pedestrian circulation routes meet vehicle routes:</p> <ul style="list-style-type: none"> <li>▪ there are adequate sight lines for the driver of the vehicle to see the pedestrian;</li> <li>▪ routes are clearly delineated from vehicle areas by the use of line markings, signage, landscaping and other barriers;</li> <li>▪ speed-control devices are used to reduce vehicle speed; and</li> <li>▪ signage is used to warn, inform and control vehicles and pedestrians.</li> </ul>
<b>Public and Active Transport Options</b>	
<p>SO6. Provision must be given for employees to access the Port by public and active transport options (walking and cycling).</p>	<p>S6.1. Development must consider linkages with established pedestrian/ cycling networks on and off strategic port land.</p> <p>S6.2. The provision of bike racks, lockers and shower facilities for employee use must be considered.</p> <p>S6.3. If a demand for a public transport service is generated, bus facilities must be incorporated in future planning in consultation with the Whitsundays Regional Council.</p>

**Table 1**

Development Type	Parking Rate
Terminal	- 1 space per 100m <sup>2</sup> Gross Floor Area (GFA); or - 1 space / employee at the time of peak accumulation (i.e. two heaviest overlapping shifts), whichever is the greater.
Office	- 1 space per 10m <sup>2</sup> Gross Floor Area (GFA); or - 1 space / employee, whichever is the greater. - 1 visitor space per 5 office employees.
Warehouse and storage facility	- 1 space per 100m <sup>2</sup> Gross Floor Area (GFA); or - 1 space / employee at the time of peak accumulation (i.e. two heaviest overlapping shifts), whichever is the greater.
Other use	As determined by the Assessment Manager
<p>Where the parking rate is calculated to a fraction, the rate is rounded upwards.</p> <p>Despite rates calculated using this table, the rate of spaces provided will always be to the satisfaction of the Assessment Manager.</p> <p>Provision must be made for car parking for individuals with disabilities together with requirements for appropriate signage in accordance with the Building Code of Australia.</p> <p>Disabled car spaces are to be designed and constructed in accordance with Australian Standards AS1428 and AS2890.1.</p>	

## 5. INFRASTRUCTURE

### 5.1 Overall Outcomes for Infrastructure

- All port land is serviced with infrastructure to ensure it functions efficiently.
- Infrastructure services are suitable for the intended or proposed use of the land.
- Infrastructure is provided in a timely manner to support new development on port land.
- Uses and activities on port land do not threaten the efficiency of existing infrastructure.

### 5.2 Specific Outcomes for Infrastructure

Specific Outcomes	Solutions
SO1. Land is adequately serviced by a level of infrastructure suitable for its locational requirements, including water supply, drainage, sewerage, energy, street lighting and telecommunications.	S1.1. No solution provided.
SO2. New development demonstrates a commitment to on-going maintenance of infrastructure.	S2.1. A maintenance plan or schedule is to be provided demonstrating developer/lessee responsibility for maintenance of on and off-site connections to infrastructure as appropriate.
SO3. Infrastructure utilities and services, whether reticulated or not, accommodates future planned development or any other infrastructure or services.	S3.1. The design and operation of all infrastructure and services does not compromise existing or future development or the provision of infrastructure. Infrastructure should be appropriately aligned and located on and off-site and allow for additional future infrastructure capacity.  S3.2. Site planning of development must prevent impacts upon underground services. Where it is proposed to build over existing utilities, the applicant must provide written approval from NQBP or the owner of the infrastructure.
SO4. Development has due regard to existing and planned State infrastructure.	<i>In partial satisfaction of SO4.</i>  S4.1. Development with any potential impact on the function or efficiency of State infrastructure should seek input during the design stage from the relevant State agency.
SO5. (i) Where a development fronts a roadway or is part of a planned port subdivision, site frontages must provide the following to an appropriate standard: <ul style="list-style-type: none"> <li>▪ high-quality sealed roadway;</li> <li>▪ kerb and channel;</li> <li>▪ safe vehicular crossings;</li> </ul>	S5.1. No solution provided.

Specific Outcomes	Solutions
<ul style="list-style-type: none"> <li>▪ area for public utilities;</li> <li>▪ effective drainage;</li> <li>▪ appropriate conduits and electrical connections; and</li> <li>▪ footpaths.</li> </ul> <p>(ii) Any damage to existing infrastructure at the front of the site (such as damage to kerb and channel, public utilities, and carriageways) must be reinstated as part of new development.</p>	
<p>SO6 The cost of providing or connecting infrastructure to new development is funded by the proponent of the new development.</p>	<p>S6.1. No solution provided.</p>
<p>SO7. Treatment and disposal of waste water and stormwater is managed in accordance with Section 3 SO10 of these guidelines.</p>	<p>S7.1. No solution provided.</p>
<p>SO8. Development provides for appropriate general waste and/or trade waste storage and collection points.</p>	<p>S8.1 No solution provided.</p>

**6. AMENITY AND LANDSCAPING**

**6.1 Overall Outcomes for Amenity and Landscaping**

- The amenity of port land, as experienced by both site users and visitors, is enhanced by new development.
- The visual impact of new development or uses on adjoining properties is minimised.
- Landscaping is used to assist with the achievement of sustainable development outcomes for a site, including the achievement of water sensitive urban design, and should integrate with building design.
- Landscaping is suited to the local environment.
- The longevity of vegetation and materials used in landscaping is maximised, and the cost of landscape maintenance is minimised.

**6.2 Specific Outcomes for Amenity and Landscaping**

Specific Outcomes	Solutions
<p>SO1. The proposed use maintains and enhances the amenity of the local area, having regard to impacts including, but not limited to:</p> <ul style="list-style-type: none"> <li>▪ noise;</li> <li>▪ hours of operation;</li> <li>▪ traffic;</li> <li>▪ lighting;</li> <li>▪ signage;</li> <li>▪ visual amenity;</li> <li>▪ privacy; and</li> <li>▪ odour and emissions.</li> </ul>	<p><i>In partial satisfaction of SO1.</i></p> <p>S1.1 Potential amenity impacts including noise, light, dust, etc are appropriately managed in accordance with an approved Environmental Management Plan.</p>
<p>SO2. Landscaping and recreation areas:</p> <ul style="list-style-type: none"> <li>▪ are of a high quality that focuses on all road and other public space frontages to enhance the overall amenity of the streetscape;</li> <li>▪ are maintained to a high level;</li> <li>▪ are designed to require limited watering and maintenance;</li> <li>▪ are integrated with the site’s stormwater-management system and is utilised for screening of air-conditioning plants and rubbish collection areas;</li> <li>▪ provide screening when viewed from private land external to the site; and</li> <li>▪ provide visual relief and shade for site users, specifically at staff recreation areas.</li> </ul>	<p>S2.1. A Landscape Master Plan will be required to be prepared and submitted for approval by the Assessment Manager. This Plan should demonstrate the following:</p> <ul style="list-style-type: none"> <li>▪ retention of existing vegetation where desirable;</li> <li>▪ landscaping for the length of all road frontages to a width of 3 metres;</li> <li>▪ screen planting to any site boundary adjoining a sensitive area (such as residential);</li> <li>▪ planting to highlight the main entry into any development;</li> <li>▪ planting densities;</li> <li>▪ shade structures, seating and other facilities;</li> <li>▪ the screening of service areas, such as rubbish bins;</li> <li>▪ details for any signage, fencing and lighting;</li> <li>▪ the integration of water sensitive urban design principles where possible; and</li> <li>▪ shade trees within car parking areas.</li> </ul>

Specific Outcomes	Solutions
	<p>S2.2 With any Landscape Master Plan a maintenance program is to be included addressing mulching, fertilizing, the replacement of dead vegetation, weed control, rubbish collection and watering.</p>
<p>SO3. Landscaping aids in the reduction of emissions of environmental concern from sites.</p>	<p>S3.1. Vegetation and landforms are designed to aid in filtering dust, screening light and reducing noise levels.</p>
<p>SO4. The location and type of planting incorporated within any landscaping does not impede the function of, or access to, services, facilities and sightlines for vehicle movement.</p>	<p>S4.1. No solution provided.</p>
<p>SO5. Vehicle parking and open-storage areas are provided with landscaping to reduce the overall visual impact.</p>	<p>S5.1. No solution provided.</p>
<p>SO6. Plant species used in association with landscaping of new development or revegetation:</p> <ul style="list-style-type: none"> <li>▪ are suited to the local climate and environment;</li> <li>▪ do not detract from the health of existing local vegetation;</li> <li>▪ are drought tolerant requiring minimal watering;</li> <li>▪ do not adversely impact on underground or overhead services and drainage reserves or easements; and</li> <li>▪ do not create potential hazards for port operations and associated uses and activities.</li> </ul>	<p><i>In partial satisfaction of SO6.</i></p> <p>S6.1. Landscaping within buffers and setbacks to sensitive areas with high ecological value incorporates endemic species that provide habitat for local wildlife and bird species.</p>

**7. EXTRACTIVE INDUSTRY**

**7.1 Overall Outcomes for Extractive Industry**

- Public safety and amenity is protected from the impacts of extractive industry operations including drilling, blasting, crushing and traffic.
- Operations are managed so that environmental impacts are contained within the premises.
- Disturbed areas are rehabilitated progressively.

**7.2 Specific Outcomes for Extractive Industry**

Specific Outcomes	Solutions
<p>SO1. The layout and sequence of activities planned for the extractive industry operation protects public safety, amenity and environmental values by:</p> <ul style="list-style-type: none"> <li>• Minimising land disturbance and vegetation loss;</li> <li>• Avoiding disturbance of cultural heritage areas; and</li> <li>• Utilising natural barriers, staging works, progressive rehabilitation, and constructing banks and landscape screens to minimise visual impacts.</li> </ul>	<p><i>In partial satisfaction of SO1.</i></p> <p>S1.1. Security fencing is provided around extractive industry operations and stockpile areas.</p> <p>S1.2. Blasting activities required for quarry operations do not result in materials escaping or being ejected from the quarry site.</p> <p>S1.3. An Ecological Assessment and Environmental Management Plan is prepared and submitted for quarry operations addressing the following matters:</p> <ul style="list-style-type: none"> <li>▪ site establishment works;</li> <li>▪ type and quantity of materials to be excavated per year and the time period involved;</li> <li>▪ method and staging of operations;</li> <li>▪ depth and extent of excavations;</li> <li>▪ existing contours of the land;</li> <li>▪ estimated depth and description of overburden;</li> <li>▪ buffering of the proposed excavation from nearby drains, watercourses, roads, frontage, buildings and other structures, and buffer area management;</li> <li>▪ energy efficiency and management;</li> <li>▪ erosion and sediment control;</li> <li>▪ dust control;</li> <li>▪ noise control;</li> <li>▪ vibration impacts;</li> <li>▪ landscaping;</li> <li>▪ resource and waste management;</li> <li>▪ stormwater management;</li> <li>▪ flora and fauna survey;</li> <li>▪ cultural heritage survey;</li> <li>▪ vegetation management;</li> <li>▪ rehabilitation management;</li> <li>▪ the capacity of the existing road system to carry the type and volume of traffic generated by the proposed use; and</li> </ul>

Specific Outcomes	Solutions
	<ul style="list-style-type: none"> <li>▪ traffic at the site and along haul routes.</li> </ul> <p>S1.4. Whether or not an Environmentally Relevant Activity, quarry operations comply with the relevant State legislation, subordinate legislation and policies for managing the environmental impacts from the activity.</p>
<p>SO2. Extractive industry operations include a buffer that effectively mitigates the impacts of noise, dust, vibration and visual amenity of operations from adjoining land and the surrounding locality.</p>	<p>S2.1. Extraction and processing activities are screened from view from any adjacent roads accessed and used by the public, as well as residential, business, industrial and special activity areas by a mixture of:</p> <ul style="list-style-type: none"> <li>▪ natural topographic features;</li> <li>▪ method of working the land;</li> <li>▪ landscaping; and</li> <li>▪ fencing.</li> </ul> <p>S2.2. A densely vegetated buffer using native species is provided which:</p> <ul style="list-style-type: none"> <li>▪ is a minimum width of 20 metres;</li> <li>▪ is provided to all boundaries of the premises; and</li> <li>▪ includes any existing areas of significant native vegetation.</li> </ul> <p>S2.3. Extraction activities are conducted at a safe distance from boundaries.</p>